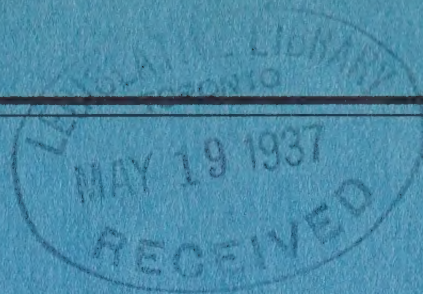


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ONTARIO

Ontario Department of Education

COURSES OF STUDY

OF THE

Normal Schools

OF ONTARIO

FOR

INTERIM FIRST CLASS AND
KINDERGARTEN PRIMARY CERTIFICATES

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO

Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
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CONTENTS

FIRST CLASS COURSE

Details of the Courses	PAGE
Programme of Studies.....	3
Text-books	3
Science of Education.....	3
School Management.....	5
Literature and Advanced Reading.....	6
Composition	7
Grammar	8
Arithmetic	8
History	9
Geography	10
Algebra	11
Geometry	11
Elementary Science	11
Advanced English	13
Reading (Primary)	13
Spelling	14
Nature Study	14
Agriculture and Horticulture.....	14
Vocal Music	15
Art	16
Writing	17
Physical Culture	18
Manual Training	18
Household Science	19
Hygiene	20
Library Methods	20

KINDERGARTEN-PRIMARY COURSE

Programme of Studies.....	21
Details of Courses—	
Science of Education.....	21
Kindergarten Principles	21
School Management	21
Special Methodology	21
Kindergarten Subjects	21
Gifts	22
Occupations	23
Mother Play	23
Talks, Stories, Songs and Games.....	23
Spelling	24
Composition	24
Nature Study and Geography.....	24
Arithmetic	25
Reading	25
Literature	26
Writing	26
Art	27
Manual Training	27
Sewing	27
Vocal Music	27
Hygiene	28
Physical Culture	28

ADDENDA

.....	29
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COURSES OF STUDY FOR INTERIM FIRST CLASS, AND KINDERGARTEN-PRIMARY CERTIFICATES

Programme of Studies

In addition to Observation and Practice-teaching, Religious Instruction, and the work of the Literary Society (see Circular 23), the Courses of Study for Interim First Class certificates consist of the following:

GROUP I.

The Science of Education, School Management, Literature and Advanced Reading, Composition, Grammar, Arithmetic, History, Geography, Algebra, Geometry, Elementary Science, Advanced English.

GROUP II.

Primary Reading, Spelling, Nature Study, Agriculture and Horticulture, Vocal Music, Art, Writing, Physical Culture, Manual Training, Household Science (for women), Hygiene, Library Methods.

NOTE—For the grouping of the above subjects at the final examinations see Circular 23 of the Normal School Regulations.

Text-Books

The text-books for the academic work are those prescribed in each subject for the High Schools.

The academic text-books which form the bases for the professional work in the various courses are:

The text-books prescribed for the Public and Separate Schools and for Grades B and C Continuation Schools.

Kindergarten-Primary: The text-books prescribed for Form I of the Public and Separate Schools.

The professional text-books are those whose titles are printed in italics in the Courses of Study outlined below.

NOTE—The teacher-in-training is required to provide himself with a copy of each of the text-books, academic and professional, connected with his course.

Books of Reference

The special books of reference in the various subjects are those whose titles are printed in black letter in the courses of study outlined below.

NOTE—Several copies of the more important books of reference are placed in the Normal School Library for the use of the teachers-in-training.

DETAILS OF THE FIRST CLASS COURSE

GROUP I

Science of Education

1. *The Nature and Purpose of Education.*

- (a) Education as growth; conditions of growth—stimulus and response; varieties of stimuli; types of response.
- (b) Aims in education; the social aim; the individualistic aim; the true aim, a combination of the best elements of each; examination of various statements of the aim in education.

- (c) Educational agencies; distinction between formal and informal education; the function of the school, the home, the church, the state, and the vocation as educational agencies.
- (d) Experience; the function of direct and indirect experience.
- (e) The school curriculum as an agency in providing the child with useful experience; the course of study as the embodiment of valuable race experience.

2. *The Learning Process.*

- (a) Learning as habit formation; habits informally developed and consciously acquired; stages in the formation of habit; value of habit.
- (b) Learning as acquisition of knowledge; principles underlying the process.
- (c) Learning as acquisition of attitudes; conditions of emotional and volitional growth.

3. *The Teaching Process.*

- (a) Teaching and habit formation; habit through free expression and conscious effort.
- (b) Teaching and the acquisition of knowledge:
 - (i) Lesson units; principles governing selection.
 - (ii) Lesson assignments; text-book assignments, the Dalton plan, the project assignment, the drill, the review.
 - (iii) Motivation in the teaching process; adjustment of school lessons to tendencies and capacities; aims in class-room activities.
 - (iv) The reconstruction of experiences; meaning of analysis and synthesis; interplay of the processes; the so-called "step of preparation."
 - (v) Particular and general ideas; how acquired; relative importance.
 - (vi) Expression and application; similarity and difference; phases of reconstruction; importance of exercises in-expression and application; relation of expression to impression.
 - (vii) Historical background of lesson procedure.
- (c) Teaching and the development of attitudes; the importance of the teacher's personality, association with others, the management of the school, and the course of study in the development of desirable emotional and volitional attitudes in children.
- (d) Questioning; its value and limitations in leading pupils to acquire knowledge.
- (e) Written examination; various types and the particular values of each.

4. *Characteristics of Children.*

The characteristics of children at various stages in their development, and the significance of these characteristics in the selection and presentation of the materials of education and in the management of the school; varying types of children; mental hygiene.

Books of Reference:

- Ontario Normal School Manual: *Principles of Method.*
- Ontario Normal School Manual: *The History of Education.*

Ballard: The New Examiner.

Bagley: The Educative Process.

Thorndike: Principles of Teaching .

Kilpatrick: Foundations of Method.

Drummond: The Child, His Nature and Nurture.

Montessori: The Montessori Method.

Morgan: The Psychology of the Unadjusted School Child.

Sandiford: Educational Psychology.

Sandiford: Mental and Physical Life of School Children.

Starch: Educational Psychology.

Symonds: Mental Hygiene of the School Child.

School Management

Meaning and Aims of School Management: Organization and government; co-operation of educational agencies; the relation of the school to the community; types of schools; government.

Relation of Management to Method: Adjustment to local conditions; progressive adjustment.

Recitation: Assignment of home and seat work in graded and ungraded schools; how to study; questioning and treatment of answers.

The Pupil: Privileges and duties; health conditions; formation of good habits; the teacher's responsibility; seating; fire-drill; nature and causes of fatigue; moral training.

The Teacher: Qualifications and characteristics of the successful teacher; his duties in relation to the child, parents, and other citizens; his code of ethics.

The Modern School: The building; the class-rooms; the play-ground; the equipment; the importance of sanitary conditions.

Organization: Grading of pupils; methods of classification; promotion during and at the close of the school year, dependent upon pupils' aptitudes and attainments; the care of the individual; the care of abnormal children.

The First Day in School: Importance of the teacher's work and attitude on the first day.

The Time-Table: Its purpose; the principles involved in its construction; typical time-tables for both graded and ungraded schools.

Records and Reports: Methods of keeping the daily and general registers; value of school records; forms of reports; annual report.

Discipline: The scope of discipline; its relation to methods of teaching; mechanized daily routine; causes of disorder and inattention; methods of dealing with weaknesses and offences; incentives; penalties.

Problems and Results: Tests of attainments; conduct of examinations; tests for promotion; results of good management.

School Law and Regulations: The Ontario Schools Acts and Regulations in so far as they pertain to the duties of school boards, teachers and pupils.

The following shall be included amongst the topics taken up under School Law and Regulations:

Agreements between teachers and school boards.

Duties and powers of teachers and inspectors; the payments of the grants and other matters directly affecting the teacher, trustees, and school.

The calling and conducting of school meetings and the consideration of matters incidental thereto, such as the duties of auditors, appeals to Inspectors, etc.

Non-resident pupils and the charging of fees.

Penalties and prohibitions regarding the buying and selling of text-books and school supplies.

NOTE 1—Attention should be given in the discussions to the historical developments of forms of school organizations and management.

NOTE 2—The Normal School principal should secure from the Department sufficient specimen pages from the authorized school registers to insure adequate instruction in proper methods of keeping the required records.

Books of Reference:

Ontario Normal School Manual: *School Management*.

Ontario Normal School Manual: *The History of Education*.

Regulations and Courses of Study of the Public and Separate Schools.

Ontario Schools Acts.

Bagley: *Class Management; Discipline*.

Bennett: *School Efficiency*.

Landon: *Principles and Practice of Teaching and School Management*.

Freeland: *Modern Elementary School Practice*.

Lowth: *Everyday Problems of the Country Teacher*.

Literature and Advanced Reading

A. LITERATURE

Introductory: The nature and elements of literature; the value of literature in developing a taste for the beautiful and the good; special importance of the teacher's own qualifications.

Methods: Primary literature; comparison of values of reading and telling; supplementary reading contrasted with the exact study; the extensive and intensive study of literature; the importance and method of memorizing selections; the value of oral reading in the interpretation and appreciation of literature; the importance of the teacher's own ability to read and recite well; the futility of attempts to develop formally the critical sense.

Necessity for preparing a suitable mood for the lesson; the lesson problem; the place of the author's biography and the experience and previous reading of the pupils; preliminary reading of the selection studied; the pupil's interpretation a matter of reconstruction of experiences; the main thought of the lesson grasped and the main feeling of the lesson impressed in a more or less definite way through a reading of it; the analysis of a selection into its wider thought elements and feeling elements, and the analysis of these again into their elements; evils of over-analysis; the place of explanation of words and phrases; the use of the dictionary; the relation of the subordinate thoughts and feelings to the unity of the whole; expression and application; the main thought and feeling of the selection as made definite by the analysis; the oral reading of the selection by pupils after study; the value of oral and written reproduction; suitable seat work; difficulties of examining in literature; specimen examination questions and discussion of their suitability.

Bases of selection of material for the different grades; lists of suitable fairy tales, fables, nature stories, etc., adapted to the lower grades and of works suitable for the higher grades; complete wholes *versus* extracts.

The course shall include a course in literature in part based on selections in the Readers; directed sessional private reading course; suggestions for future reading; the literary study of the portions of the Bible prescribed by the Department of Education.

NOTE—Teachers-in-training having conscientious objections to the literary study of the Bible are excused therefrom by the Principal.

B. ADVANCED READING

In the study of literature the teacher-in-training should be given much practice in oral reading. For the details of this course, see page 13.

Books of Reference:

Ontario Public School Manual: *Literature*.

MacClintock: Literature in the Elementary School.

MacPherson: The Study of English Literature.

Arlo Bates: Talks on the Teaching of Literature.

Leonard: Essential Principles of Teaching Reading and Literature.

Tomkinson: The Teaching of English.

Composition

Introductory: The value of language training; the place of a knowledge of the mother-tongue in education; the value of clearness, force, and grace of expression; the formation of habits of speaking and writing good English; the effect of the teacher's example upon the pupil's language; value of reading and of memorizing good literature; importance of libraries for supplementary reading; incidental work in language training; expression as a stage in the development of every lesson; necessity for special exercises in oral and written composition.

Methods: Oral exercises for encouraging pupil's free natural expression and extending his vocabulary; importance of framing questions that will require answers of considerable length; criticism of oral work; the dangers connected therewith and the means of avoiding them; value of formal linguistic exercises; method of correcting errors of speech; relative value of pupil's own language and of special exercises as material for criticism; use of language games; the relation of oral to written composition; the relative values of reading and telling stories; the principles to be kept in view in conducting exercises in written composition; supervision and aid during writing; value of topical outlines; the place of homework in written compositions; method of correcting written compositions; value of rewriting; difficulties in examining in composition.

The mechanics of written composition; paragraph and sentence structure; paragraph compositions; the use of capitals, punctuation marks, quotation marks; abbreviations, etc.

Principles governing the choice of topics for the different grades; gathering, selecting and arranging material; class answers as material for oral composition;

short stories; description of personal experiences, real and imaginary, and of places, operations and processes of personal interest; striking incidents in the history of the families of the pupils; pictures suggestive of stories; school games; autobiographies of familiar things; themes from minor incidents and from school studies; general themes; letter writing, with special attention to form and style; invitations and replies thereto.

Books of Reference:

Ontario Public School Manual: *Composition and Spelling*.

Arlo Bates: Talks on the Writing of English.

Dickie: Modern Practice in the Teaching of Composition.

French: Writing.

Diltz: Models and Projects for English Composition.

Grammar

Introductory: The meaning of English Grammar; its relation to Composition; reasons for and against retaining it in elementary schools; reasons for deferring the formal study till Form IV; introductory work of Form III to be taken in connection with Composition.

Methods: The lesson plan; necessity of care in selecting examples; value of function; use of grammatical terminology; definitions, their value, how to be obtained, how to be applied; value of rules of syntax; use and value of our remaining inflections; substitutes for inflection; analysis and parsing, aim and value of each, method of conducting; value of diagrams; oral and written exercises; treatment of false syntax; the review lesson, how to be conducted; a review of the main topics in the grammar course; history of the development of the English language.

Books of Reference:

Ontario Public School Manual: *Grammar*.

Leonard: Grammar and Its Reasons.

Martyn: Grammar in Elementary Schools.

Arithmetic

Methods: The development of the number idea; the unit, its nature and use; the necessity for standard units; the ratio idea of number.

Analysis and synthesis; induction, and deduction; use of graphic methods and of concrete material; use of prescribed apparatus; drill and devices to secure accuracy and rapidity in computation; importance of oral arithmetic.

Essentials of proper solutions; criticism of solutions; type solutions; unitary method; simple problems involved in complex; solutions by full analysis and by performing only necessary operations; selection of problems.

The various arithmetical operations and their application, with special stress upon the elementary work.

Counting: measuring with standard units; numbers from 1 to 10, from 10 to 20, etc.; number pictures; notation and numeration.

Addition: addition tables; order of exercises; devices.

Subtraction: additive and decomposition methods; order of exercises; devices.

Multiplication: relation to addition; tables; order of exercises.

Division: relation to subtraction; relation to multiplication; short and long processes; order of exercises; factors and factoring; division by factors; cancellation; checking.

Measures and multiples.

Fractions: different interpretations; notation; operations; decimal fractions, correspondence of methods with those of integers.

Compound Rules: tables of weights and measures; reduction; metric system, when and how it should be taught.

Percentage: application to profit and loss, trade discount, commission, insurance, taxes, interest, discount, etc.

Mensuration: the areas of rectangles, triangles, and circles; the volumes of rectangular solids, prisms, cylinders, and cones; the necessity of models in teaching mensuration.

Square root.

Books of Reference:

Ontario Public School Manual: *Arithmetic*.

Godfrey and Siddons: *The Teaching of Elementary Mathematics*.

Lennes: *The Teaching of Arithmetic*.

History

Introductory: The special value of Canadian and of British History; what makes an event important; natural attractiveness of biography and its relation to history; the effect of the study of biography on the development of character; the relation of epochs to biography; systematic chronological study of history, its value and its dangers; the causal sequence of events; ends to be kept in view in teaching civics.

Methods: Special necessity for the adaptation of the teaching of history to the different stages of the pupil's mental development. The picture and story stage: a methodically arranged series of picturesque biographies graphically narrated; no text-book. The information stage: an introduction to history proper methodically presented, external and picturesque side made prominent, with emphasis on biographical and social aspects; introduction of history readers and biographies in the library. The reflective stage; the study of simple causal relations and of the origin, development, and inner life of our civil institutions.

The recitation, its form and purpose; oral teaching and blackboard work by teacher; oral and written exercises by pupils at seat and at home; the use of pictures, maps, etc., of readers, of the text-book, and of current journals and periodicals.

The selection and arrangement of the following topics for the different grades:
History of aborigines; local history, beginning with the pioneers; current history.

Characteristics of peoples, as those of the United States, Japan, China, Germany, France, Italy, Quebec.

Suitable biographies for different grades, as the lives of explorers, navigators, and soldiers, for primary grades; of statesmen, poets, scientists, inventors, etc., as representing more complex conditions, for higher grades.

The main epochs in British and Canadian History.

Civic institutions as appearing in their lowest forms among primitive peoples; the beginnings of governments, courts, school systems, farms, factories, routes and means of transportation, etc.; present forms of civic institutions.

Mythology, ballads, orations, epics, legends, tales of chivalry, narrative poems and historical novels; character of history readers and of supplementary works for the different grades.

Significance and value of the flag.

The causes and main events of the Great War.

Books of Reference:

Ontario Public School Manual: *History*.

Wallace: *A Study in Government*.

Barnard: *The Teaching of Community Civics*.

Jarvis: *The Teaching of History*.

Johnson: *Teaching of History*.

Macpherson: *Visual Aids in the Teaching of History*.

Tryon: *The Teaching of History in Junior and Senior High Schools*.

Cochrane and Wallace: *This Canada of Ours*.

Geography

Methods: The order of development in rural and urban schools; the use of maps, globes, pictures, blackboard drawings, natural objects, specimens of products, lantern slides and stereoscopic views, modelling, map drawing, scales, and projections; weather observations and records; simple experiments in explanation of natural phenomena; excursions in connection with observations in local geography; inter-school correspondence; the use of the reference library, books of travel, geography readers, newspapers and periodicals, etc.; common mistakes in teaching geography and means of avoiding them; the relation of physical to commercial geography.

A review of the following topics together with the selection and the arrangement of subject-matter suitable for the different grades: The earth's surface and the changes wrought thereon by the various agencies; rock formation and distintegration; study of a few of the commoner rocks and rock forming minerals; origin, formation and composition of soils; distribution of mineral deposits, including local deposits of building material, as marl, limestone, brick, clay, sand, and gravel, and also of plant and animal life; the relation of the earth to other heavenly bodies; weather and climate; man's relation to the rest of the world; interdependence of nations; commercial and political geography; the relation of geographical conditions to historical events and to the development of nations.

Books of Reference:

Ontario Public School Manual: *Geography*.
 Amoss: Play Story Geography; Canadian Neighbours.
 Cornish: Geography of Commerce for Canadians.
 Stamp: The Teaching of Geography.
 Wallis: The Teaching of Geography.

Algebra

Arithmetical algebra; transition from arithmetic to algebra; generalization of language and of method; the introduction and defining of symbols; the negative quantity; the simple rules; the distributive law, commutative law, index law, sign rule; the equation and its place in algebra; factoring; highest common factor and lowest common multiple; use of detached coefficients; classes of simple equations; simple simultaneous equations of two and three unknowns; symmetry and its applications in elementary algebra; square root; method of dealing with problems and the object to be kept in view in their solution; verification of results; correlation of algebra and geometry; graphical methods of illustrating formulae and of interpreting the roots of equations; Lower School algebra.

Books of Reference:

Godfrey and Siddons: The Teaching of Elementary Mathematics.
 Ligda: The Teaching of Elementary Algebra.
 Schultze: The Teaching of Secondary Mathematics.
 Smith: The Teaching of Elementary Mathematics.
 Smith and Reeve: The Teaching of Junior High School Mathematics.
 Young: The Teaching of Mathematics.

Geometry

Practical geometry to precede theoretical; use of instruments; necessity for accuracy; distinction between practical geometry and geometrical drawing; practical problems in the solution of triangles, and in measuring heights and distances; limitations of appeals to the concrete; value of experimental proofs; need of clear and definite conceptions of the fundamental truths; the place of the definitions and axioms; when and how they should be introduced; home-work and class-work; the proposition; the analytic-synthetic method of dealing with propositions and deductions; the comparative values of propositions and exercises; how to get pupils to work original exercises; necessity of original work from the beginning of theoretical geometry; the indirect method of demonstration; methods of class teaching; importance of note-books for pupils' exercises; the grouping and relating of propositions; applications of algebraic solutions; Euclid's method compared with modern methods; method of teaching the more important propositions and exercises in Book I of the authorized text.

Books of Reference:

See Algebra above.

Elementary Science

Scientific Method: The teacher's general objectives in science teaching; the meaning of science and scientific method; relation of science to everyday life; obser-

vation and experimentation as a means of relating facts as causes and effects; how to plan inductive and deductive investigations; how to conduct classroom and laboratory instruction; explanations of the experiment; the problem, and the project methods; purpose and management of outdoor observations and field trips; use and management of aquaria, vivaria, note-books, text-books, and supplementary reading; laboratory equipment and making of simple apparatus.

NOTE—*The foregoing should not form the subject of a separate and continuous series of lessons at the beginning of the course but should be stressed and discussed in connection with appropriate topics and lessons throughout it.*

Biology: Methods of instruction applied in presenting the more difficult parts of the Lower School botany course and in the study of insects, fish, frogs, toads, birds, cat, and rabbit, as required in the Lower School zoology course; collection and preservation of materials for study; value and characteristics of good drawings; written and oral descriptions, charts; identification of plants by use of a flora.

Physical Science: Method and management illustrated by developing the following topics in physical science and by practical applications of the principles involved:

(a) *Matter:* Properties of solids, liquids, and gases.

(b) *Air:* Air occupies space, has weight, exerts pressure; the barometer; measurement of humidity; common pump; relation between volume and pressure of a gas; diffusion of gases; combustion in air; rusting of iron in air; preparation, properties, and economic importance of oxygen, nitrogen, carbon dioxide; experiments to show the presence of these three gases and water vapour in air; action of carbon dioxide on limestone.

(c) *Fluids:* Archimedes' Principle (Law of Buoyancy); specific gravity of solids heavier than water; capillarity; Pascal's Law; osmosis.

(d) *Heat:* Transmission by conduction, convection, and radiation; expansion of solids, liquids, and gases; relation of boiling point to pressure; the effect of salts in solution on the boiling point and freezing point of water; maximum density of water; temperature as contrasted with quantity of heat; heat units; meaning of specific heat; the high specific heat of water; conversion of water vapour into (i) liquid (water condensation); (ii) solid (sublimation).

(e) *Light:* Propagation in straight lines; shadows and eclipses; simple experiments on reflection, refraction, and dispersion of light.

(f) *Measurements:* Experimental method of dealing with this topic should be stressed.

NOTE—*Care should be taken to show, where possible, the application of the foregoing topics to the science, physiography, and agriculture of the Lower School.*

Books of Reference:

Ontario High School Manual: *Suggestions for Teachers of Science.*

Ontario Public School Manuals: *Nature Study; Geography; Household Science.*

Brown: *Teaching Science in the Schools.*

Hensley and Patterson: *Science, Indoors and Out.*

Twiss: *Principles of Science Teaching.*

Westaway: *Science Teaching.*

Advanced English

The study of literature in this course is to be extensive rather than intensive, and large use should be made of the library.

Shakespeare: King Lear.

Addison: Sir Roger de Coverley.

Gilbert Parker: When Valmond Came to Pontiac.

Thackeray: Vanity Fair.

Keats: The Eve of St. Agnes; Ode to a Nightingale.

Milton: L'Allegro and Il Penseroso.

Characteristics and examples of the following forms: ballad, lyric, sonnet, elegy, ode, pastoral poem, blank verse, Spenserian stanza.

Scansion of simple poetry.

GROUP II

Reading

Introductory: The processes involved in reading; the relation of ideas to symbols; the associations of visual, auditory, and motor images in reading; conditions of the formation of accurate visual and auditory impressions; constant necessity for connecting the printed word directly with the idea; the function and value of silent reading, sight reading, elocution.

Primary Reading: The various methods of teaching beginners, advantages and disadvantages of each; devices for securing rapid word-recognition and for fixing attention on the thought and feeling as well as upon the word forms in the earlier stages; means of securing natural expressive reading; the place and limitations of imitative reading; common faults on the parts of both pupil and teacher and how to correct them; criticism by teacher and by pupils.

Advanced Reading: Change in purpose and methods of reading as determined by the development of the pupil's experience and powers; the necessity for giving attention to expression in all stages; expression to be based on impression; the objects of advanced reading; methods of developing in pupils the reading habit and of creating and fostering a taste for good literature; the mechanical side of oral reading; correct pronunciation and distinct articulation, with suitable tone, pitch, inflection, movement and pause, grouping, force, emphasis, quality, etc.

Intelligent and intelligible natural reading; the principles to be learned incidentally and summarized at the close of the course; exercise in breathing, articulation, and vocalization.

Books of Reference:

Public School Manuals: *Primary Reading; Ontario Readers, Books II, III, IV.*

The High School Reader: (The Canada Publishing Co.).

Clark: Interpretation of the Printed Page.

Stone: Silent and Oral Reading.

Spelling

Introductory: Value of spelling; nature and origin of the peculiarities of English orthography; causes of incorrect spelling and the difficulties experienced by pupils in learning to spell.

Methods: Necessity for teaching, not merely testing, spelling; the various methods of teaching spelling; the adaptation of each to the nature of the words and to the mental characteristics of the individual; phonic exercises, word-building and derivation in relation to spelling; syllabication; the place of transcription and dictation; checking and correcting errors; value of re-writing; prevention versus correction; the character of drill and review exercises; methods of varying the recitation; value of rules.

Principles of selection of material; grouping of words, incidental spelling; uses of the dictionary and of the spelling book.

Book of Reference:

Ontario Public School Manual: *Composition and Spelling*.

Nature Study

Methods: Nature study as a method; special characteristics of a typical nature study lesson; uses and limitations of records of observations; directions for conducting school excursions; the study of typical topics dealing with materials of nature study and illustrating methods of presentation in all grades; the great importance of relating feeling to knowledge in nature study work.

Selection of material for pupils of different grades and for varying conditions in rural and urban schools; uses and limitations of books, pictures, models, collections, etc.; supplementary materials such as stories and poems.

School gardens as a phase of nature study work; directions for the planning, planting and care of school gardens.

Frequent excursions for the purpose of studying and collecting materials in their natural environment.

Books of Reference:

Ontario Public School Manual: *Nature Study*.

Hodge: *Nature Study and Life*.

Dearness: *How to Teach Nature Study*.

Silcox and Stevenson: *Nature Study*.

Scott: *Nature Study and the Child*.

Agriculture and Horticulture

The course in Agriculture leading to the Elementary Certificate assumes a satisfactory knowledge of the Normal School course which includes the following:

Dairying: Food value of milk, butter, buttermilk, whey; care of milk; pasteurization; use of Babcock tester and the lactometer; examination of a sample of milk with a compound microscope; churning; care of butter.

Poultry: Types and common breeds of hens; care of poultry; incubation; candling, grading and care of eggs; suitable poultry houses.

Insects and Birds: Injurious and beneficial insects; losses from insects; insect control; insecticides; birds and their relation to agriculture; bird migration; game birds; bird laws; bird housing and other methods of protecting birds.

Fruit Growing: Pruning; spraying; grafting; propagating; cover crops and cultivation; packing and shipping fruit; definition of fruit; classification into dry and fleshy fruits.

Gardening: School gardens, planning and management; work in the garden by the teachers-in-training; observation of the work done by pupils; care during summer; disposal of the products; home gardens; the management of a home garden; growing vegetables and flowers; planning an experimental plot; hot bed and cold frame; care of tools.

Improvement of School Grounds: Planning; tree-planting; use of shrubs; perennial flowers; caring for a lawn; growing bulbs for winter bloom; care of house plants; propagation by cuttings.

Experiments: Capillarity of soil; presence of soluble material in soil water; osmotic action; experiments to illustrate: transpiration, formation of starch in sunlight, disappearance of starch in darkness; exhalation of a gas by living green plants in sunlight; phototropism; testing for starch in tubers, seeds, etc.; experiments to show that germinating seeds give off carbon dioxide; microscopic examination of plant cells, stomates, root hairs.

School Fairs, Clubs: The relation of the school to the school fair; how organized and managed; their use in the teaching of agriculture.

Home Projects: Their connection with class-work; developing individual responsibility in the pupils; visits of teacher.

Method: Method of teaching the above topics.

Books of Reference:

Ontario Teachers' Manual: *Elementary Agriculture and Horticulture.*

Hutchison: *Agriculture for the Public Schools.*

Ontario Public School Manual: *Nature Study.*

Canadian Agriculture for High Schools.

Zoology for High Schools.

Botany for High Schools.

Waters: *The New Agriculture.*

Readey: *A Manual in Canadian Agriculture.*

NOTE—By special arrangement with the publishers, teachers-in-training may obtain at the Normal School copies of *The New Agriculture* and *Agriculture for Public Schools* at a reduced cost. The Principal will make an announcement on the subject as soon as the school opens.

Vocal Music

System: A practical knowledge of recognized systems of teaching the tonic sol-fa and staff notations; the relative importance of the staff and tonic sol-fa systems and the grading of musical studies.

Notation: Elements of notation, both tonic sol-fa and staff; the formation of the major and minor diatonic scales; elements of modulation and transposition.

Vocal Physiology: Comparison of abdominal, intercostal, and clavicular breathing; the larynx; action of the vocal cords in the production of the vocal registers; influence of the mouth and nasal cavities on vocal resonance and vowel quality.

Tune: Practice in singing from the staff and tonic sol-fa modulators; intervals of moderate difficulty contained in the major diatonic scales; modulation from any given key to its relative minor, and its dominant and sub-dominant.

Time: Practice in singing rhythmical studies in simple or compound duple, triple, or quadruple time; the pulse as the unit of measurement in time, with its division into halves, quarters, or thirds in varied combination.

Ear Training: Development of the power to recognize by ear, and to transcribe the tonal and the rhythmic elements of short musical phrases, when sung or played.

Voice Culture: Practice in correct tone production; vowel formation; enunciation of consonants; breath control; correct intonation; and the equalization of the various registers of the voice.

Songs: The study of songs suited to the requirements of pupils in all grades with special attention to development of power in musical expression; the study of part songs of recognized merit, arranged for adult voices; use of the phonograph.

NOTE—Teachers-in-training who, from any cause, consider themselves incapable of learning to sing should present their claims to the teacher of music at the beginning of the session. For such teachers-in-training special instruction, if likely to be effective, will be provided, adapted to their needs. The written examinations, however, are compulsory for all students. If a candidate is unable to teach music, this fact is stated in the certificate.

Books of Reference:

Cringan: *The Educational Music Course.*

Cringan: *Teacher's Handbook of Tonic Sol-fa System.*

Cringan: *The New Canadian Song Series.*

Boozey: *Songs for All Voices—Imperial Edition.*

Curwen: *The Standard Course.*

Curwen: *The Teacher's Manual.*

Ham: *The Rudiments of Music and Elementary Harmony.*

Hardy: *How to Train Children's Voices.*

Hunter: *Progressive Staff Readers.*

Hill: *The Singing Period.*

Mason: *How to Teach the Staff Notation.*

Hulbert: *Breathing for Voice Production.*

Art

Methods: The development of each division of the subject through the different Forms, with due consideration of the underlying principles which it is expedient to teach in each Form; the interrelation of the different divisions of the subject; the selection and organization of the subject matter in each division from the standpoint of lesson presentation; methods of presentation, mediums, and modes of expression suited to the different Forms; the use and value of drills and their proper time and place; the discussion of difficulties and ways and means of obviating these; points to be considered in the valuation of drawings; methods of examination; class criticisms and the selection of good examples of pupils' work for future use as illustra-

tive material; the collection, preparation and organization of illustrative material; necessary materials and apparatus, their use and care; the selection, preparation, and care of specimens and models; useful accessories and helps.

Representation: Appropriate mediums and modes of treatment for the following: specimens from nature such as grasses, twigs, flowers and other parts of plants, and such common objects as brooms, saws, shovels; trees and simple landscapes; birds, animals or insects; spherical, cylindrical, and rectangular solids, or other objects through which the principles of freehand perspective may be observed; simple groups of objects.

The illustration of games, occupations, events, nursery rhymes and stories; drawing from the pose; practice in rapid drawing on the blackboard with white and coloured chalks.

Colour: The solar spectrum; the six standard colours, with their intermediate hues; the three properties of colour, with scales exemplifying these; the making and applying of uniform and graduated washes of colour; monochromatic, complementary, analogous, and dominant harmonies, and their use in decorative compositions and designs, and also in problems relating to life, such as the choosing of suitable colour schemes for dress, house furnishing, and schoolroom decoration.

Decorative Design: The sources of design; the laws that underlie good design; the making of borders, all-over patterns, and other surface patterns, and their application to appropriate constructed objects.

Lettering: The principles of good lettering; single line capital letters; Roman capitals; small (or lower case) letters; the use of letters in titles, mottoes, and posters.

Composition: A study of the principles of good composition in the arranging of specimens and models, and in the size, spacing, and placing of drawings.

Picture Study: The critical study of a few masterpieces from the standpoints of handling, composition, and the thoughts conveyed by the artist.

Books of Reference:

Ontario Public School Manual: *Art*.
 Manual Arts Drawing Books.
 Graphic Drawing Books.
 Art Education for High Schools.
 Text Books for Art Education.
 Caffin: A Child's Guide to Pictures.
 Emery: How to Enjoy Pictures.
 Koch: Pencil Sketching Portfolio.
 Taylor: Elementary Art Teaching.
 Dow: Composition.
 Strange: Handbook of Lettering.
 Hatton: Perspective.

Writing

Methods: Various styles of penmanship, their advantages and their disadvantages, their points of excellence, and their relative importance; the child's difficulties in mastering writing; the earliest lessons and the work preliminary to formal writing;

the steps in the lessons and the standards in the intermediate and the senior grades; the materials to be used; the various writing movements and their value; relation of teaching lessons to home or seat exercises; right posture and penholding; the eye and its control of penmanship; importance of good writing materials; formal drills; value, management, various forms of movement drills; the best organization of these exercises; counting, its purpose, its use; relations of speed and accuracy; letter groups on the basis of movement; the chief defects in children's penmanship, their causes, the necessity for prompt detection and thorough correction; individual versus class errors; uniformity of attainment in a class, its value, how fostered; prevention of scribbling; observing the conventional letter forms throughout the grades; economizing time; use of standard charts for judging writing.

Book of Reference:

Ontario Public School Manual: *Writing*.

Physical Culture

Effects of physical culture; its hygiene; general directions for exercises; simple exercises and positions; marching, running, jumping, and breathing exercises; the arrangement of the class (order movements); order and progression of exercises; as many as practicable selected physical exercises in the tables of *The Syllabus of Physical Training for Schools*, 1933; supplementary physical exercises; abdominal exercises, skipping exercises, dancing steps, indoor and outdoor games; folk dances; singing games; class-room exercises; dress suitable for exercise, calisthenics, and drill.

NOTE—While formal drill has its place in physical culture, it should not be stressed at the expense of the recreational exercises, games, sports, folk dances, etc.

Books of Reference:

The Syllabus of Physical Training for Schools. Revised Edition, 1933.

Barton: Physical Training, including Athletics and First Aid to the Injured.

Bancroft: Games for the Playground, Home, School and Gymnasium.

Cantlie: First Aid to the Injured.

Kimmons: Guild of Play Books, Parts 1, 2 and 3.

Furbush and Allen: Book of Games.

Wood and Cassidy: The New Physical Education.

Colbey: Natural Rhythms and Dances.

Neilson and Van Hagen: Physical Education for Elementary Schools.

Niels Bukh: Fundamental Gymnastics.

Manual Training

Equipment: The equipment for urban and for rural schools.

Handwork: Typical forms of constructive work adapted to the capacities of pupils in Forms I, II, and III, including weaving, elementary paper and cardboard work and modelling; simple exercises with raffia.

Advanced cardboard work; bookbinding, simple repair of books, trimming and mounting of pictures.

Materials used for modelling and how to keep them; modelling natural forms; modelling as a means of teaching geographical concepts; supplementing observation of the topography of the school neighbourhood; supplementing word pictures in readers, etc.; models used in conjunction with the teaching of drawing and design.

Tools and how to keep them in good working order; designing; a short course in bench work; uses of woods and their suitability to such uses; such exercises as may be related to agriculture and horticulture, nature study, school exhibits, etc.

Drawing: A short course in mechanical drawing with and without instruments; plans and blueprints.

Books of Reference:

Ontario Public School Manual: *Manual Training*.

Story-telling with Scissors.

Swannel: Paper Modelling.

Baxter: Paper and Cardboard Construction.

Lester: Claywork.

Sargent: Modelling in Public Schools.

Noyes: Handwork in Wood.

Prang: Industrial Arts Text Books.

Prang: The Manual Arts for Elementary Schools.

Marten: Manual Training Play Problems.

Household Science

Equipment: The equipment for urban and for rural schools.

The House: Purpose; location; general ideas concerning use and furnishing of the rooms; methods of cleaning, including principles of laundering.

Foods: Elements of food required by the body; their sources, food value, and digestion; analysis of common foods—milk, eggs, meat, fruit, vegetables, cereals; effect of heat on these, as to food value, digestibility, and flavour.

The principles of feeding during infancy and childhood.

Cookery: Principles of combustion; construction and care of stoves; fuels; principles and practice of each method of cooking—boiling, simmering, steaming, steeping, toasting, broiling, frying, baking; food combinations; flour mixtures; lightening agents used in these; table service; the preparation and serving of school lunches; meals.

Bacteriology: Occurrence and nature of bacteria; sanitation based on this knowledge; necessity for cleanliness, care of plumbing, disposal of waste, methods of disinfection; preservation of foods.

Sewing: Study and application of different stitches; basting, running stitching, back stitching, combination stitch, overcasting, top sewing, blanket, herring-bone, feather-stitching, mending, darning (different kinds); button holes; mitred and square corner; hemming; making doll's apron.

Textile materials used: their identification, names, kinds, widths, and usual prices; variations of weave in regard to beauty and strength; growth, manufacture, and finish of cotton, silk, wool and linen, and their use and value for clothing.

Books of Reference:

- Ontario Public School Manuals: *Household Management, Sewing, Household Management for Rural Schools.*
 Greer: Food and What It Does.
 Jones: Lessons in Elementary Cooking.
 Lincoln: The School Kitchen.
 Daniels: Furnishing of a Modest Home.
 McGlanfin: Handicraft for Girls.
 Walker: Manual of Needlework and Cutting Out.

Hygiene

School Hygiene: School sanitation, common facts of bacteriology, general instructions for the detection of common communicable diseases; modes of preventing the spread of these diseases; the sanitary provision of *The Ontario Public Health Act* and Regulations, so far as they pertain to pupils, teachers and school boards.

Personal Hygiene (with the necessary minimum of anatomy and physiology): Framework of the body, spinal curvature, its causes; digestive system; foods; care of teeth; saliva; physiology of respiration and circulation; skin and other depuratory organs; nails; hair; bathing; clothing; etc.; muscles; the relation of exercise to health; brain and nervous system; relation of mind to body; mental exercise; study; rules regarding mental work; irregular work and overwork; mental strain and worry; effects of alcohol, tobacco, etc., on organs and functions.

Myopia and presbyopia; affections of the eye by improper school accommodations; colour blindness; tests for defective eyesight; ear, throat, and nose troubles causing dulness in pupils; tests for defective hearing and breathing.

Accidents and Emergencies: First aid in such cases as fainting, suffocation, drowning, hemorrhage, fractures and dislocations, venomous stings, poisoning, frost-bites, sunstrokes and heat strokes, burns; bandaging.

NOTE—Certain of the foregoing topics are included also under others of the professional courses; they should be reviewed in Hygiene.

Books of Reference:

- Ontario Public Health Act and Regulations.*
 Bailey & Coleman: First Book of Biology. (Part on Human Biology.)
 Gulick Series: Good Health, Emergencies, Town and City, Body at Work, Control of Body and Mind.
 Health Series of Physiology and Hygiene: Health Habits, Health and Cleanliness. The Body in Health, Making the Most of Life.
 Mari Hofer: Popular Folk Games and Dances for Playground, Vacation School, and Schoolroom Use.
 Burchenal: Dances of the People.
 Burchenal: Folk Dances and Singing Games.

Library Methods

The use of card catalogues, reference books and periodicals, and information files; the organization and administration of a library in a rural school; the relation of the school library to the community, the selecting of books for a school library; the reading room; the care of books; library lessons with children.

KINDERGARTEN — PRIMARY COURSE

Programme of Studies

In addition to Observation and Practice-teaching, Religious Instruction and the work of the Literary Society (see Circular 23), the Courses of Study for Interim Kindergarten-Primary certificates consist of the following:

Group I: Science of Education; Kindergarten Principles; School Organization and Management.

Group II: The special methodology of the following subjects of the Kindergarten, the Kindergarten-Primary and Form I:

(A) The subjects of Kindergarten Practice.

(B) The subjects of the Kindergarten-Primary and First Forms as follows:

(1) Spelling, Composition, Nature Study and Geography, Arithmetic.

(2) Literature, Reading, Writing, Art, Manual Training, Sewing, Vocal Music, Hygiene, Physical Culture.

DETAILS OF THE COURSE

GROUP I

Science of Education

The same as the First Class Course. (See page 3.)

Kindergarten Principles

The kindergarten as a function of education.

Froebel, with special reference to the development of elementary education.

Froebelian principles and their application in the kindergarten methodology and practice, organization, and equipment.

The Montessori Method and its applicability to Ontario school conditions.

School Management

The same as the First Class Course, but with special reference to the Kindergarten, the Kindergarten-Primary and Form I. (See page 5.)

GROUP II

Special Methodology

General Books of Reference:

The same as those for the First Class Course. (See pages 4 and 5.)

GROUP II A

Kindergarten Subjects

1. Gifts

The course in the Gifts includes a knowledge of the Froebelian Gifts in sequence; their general and specific objects; and their functional value in connection with

kindergarten and kindergarten-primary work; an adequate number of illustrative forms in a progressive sequence to be entered in a Gift Book, as follows:

First Gift: Exercises involving varied objectives.

Second Gift: Exercises in familiar activities, with new purpose and varied form.

Third Gift: Exercises showing the transition to productive self activity. Four original forms of life; three original forms of beauty.

Fourth Gift: Three original sequences in forms of life, not fewer than six forms in each sequence; three original sequences in forms of beauty, not fewer than six forms in each sequence.

Building problems for estimating dimensions, not fewer than four problems.

Exercises illustrating balance.

Fifth Gift: A list of original forms of life, not fewer than six; two symmetrical designs (one border), one sequence in symmetrical designs, not more than five forms.

Exercises with the Fifth Gift should embody experiences with numerical relations and in development of geometric form.

Sixth Gift: A list of original forms of life, not fewer than six forms; building problems, not fewer than four problems in the list.

Seventh Gift: Derivation; definition; position of one tablet; relative position of two tablets to each other; geometrical figures that may be produced by combining two tablets; geometrical figures produced by combining three tablets; three life forms with two tablets; three life forms with four tablets; three life forms with eight tablets; two life forms with sixteen tablets.

Decorative forms (symmetrical design): One design, emphasizing repetition, as in borders; two symmetrical designs involving sequence leading to design as required in Art.

Eighth Gift: Two forms with each of the following combinations: Combination of sticks into life forms, using four sticks, even lengths; combination of sticks into life forms, using eight sticks, even lengths; life forms with sixteen sticks; life forms, using sticks of any length.

Decorative design: Three designs emphasizing repetition as in borders; two designs in "all over" repeats; two symmetrical designs involving expansion.

Ninth Gift: Relative position of one large and one small ring to each other; exercises in the discovery of the relative position of the different sizes of rings to one another; one ring of each size; relative position of two half-rings to each other; relative position of one half-ring and one whole ring to each other; one life form with five rings; one life form with ten rings; one life form with four half-rings; miscellaneous forms of life with rings, half-rings, and quarter-rings; four symmetrical designs, using rings, half-rings, and quarter-rings, including two borders.

NOTE—All forms, designs, and exercises with blocks, tablets, rings, etc., should be placed in proper Gift Book.

2. Occupations

The course in the Occupations includes a knowledge of the Froebelian Occupations, the methods of applying them in teaching and the tracing of their connection with other branches of Kindergarten work.

Sewing: Designing and perforating picture cards and sewing them with suitable colours; methods in the development of simple sequences in borders and in symmetrical designs.

Weaving: Methods in the development of a logical sequence in weaving, borders, all over patterns, diagonal effects and their application to appropriately constructed objects, attention being paid to colour harmonies.

Folding and Cardboard Construction: A series of forms from the circular basis; construction of objects based on the salt-cellar and the table cloth ground form with possible variations; a series of forms leading up to the sixteen square ground-form and the construction of objects based thereon; baskets, favours, etc., suitable for special occasions.

Pictorial and Decorative Design: Paper tearing, free cutting, outline cutting; arranging and mounting in groups the objects cut to illustrate scenes, stories, songs and games; advance pictorial work suitable for kindergarten decoration.

Drawing and Painting: The use of various colour mediums in directed or imaginative expressions.

The Sand Table: Method in the development of simple manipulative and constructive activities; individual and co-operative work in the illustration of stories and the presentation of various experiences necessary to child development.

Modelling in Clay and Plasticine: Methods in the development of typical forms connected with the child's interests, form the ball, cylinder and cube; development of story illustration and of expression of the child's ideas in original forms.

Stringing: Beads, discs, nature material in rhythmic arrangement of colour and number units.

Pegs and Beads: Development of colour, number, spacing and symmetrical design.

3. Mother Play

The course in the Mother Play includes a study of the educational principles and practice of Froebel as embodied in the "Mutter and Kose Lieder," and the relation of the Mother Play to the practical work of the Kindergarten. It includes also a critical analysis of the Mother Play as a whole; the history of its development, its educational aim, a detailed study of twelve typical songs, and the development of typical experiences through groups of songs.

4. Talks, Stories, Songs, and Games

The course prepares the teacher-in-training to act the part of a kindly guide to the child, leading him by familiar talks to seek and become acquainted with those things in his environment which would be of interest and value to him, and enables her to select and teach songs suitable both in music and in words, to select and tell stories suitable in character, and to select and teach games suitable to the needs of the growing child and preparatory for the folk dances, calisthenics, and drill of the rest of the course.

NOTE—In discussing kindergarten principles special attention is given to the question of historical development.

Books of Reference:

- Blow: *Mottoes and Commentaries of Froebel's Mother Play*.
 Curtis: Practical Conduct of Play.
 Drummond: The Child, His Nature and Nurture.
 Froebel: Education by Development.
 Blow, Hill and Harrison: The Kindergarten.
 Fulmer: The Use of the Kindergarten Gifts.
 Morgan: The Montessori Method.
 Lee: Play in Education.
 Milton Bradley: Paradise of Childhood (Golden Jubilee Edition).
 O'Shea: New Ways with Children.
 K. D. Wiggin: Kindergarten Principles and Practice.
 Harrison: The Unseen Side of Child Life.
 Tom: Everyday Problems of the Everyday Child.
 Wheelock: Talks to Mothers.
 Wellock: A Modern Infant School.

GROUP II B**Kindergarten-Primary and First Form Subjects**

The course embraces an introductory discussion of the functional connection of each of the courses of the Kindergarten with those of the Kindergarten-Primary and Form I.

Spelling

The same as the First Class Course, but with special reference to the Kindergarten-Primary and Form I.

Composition

Introductory: The value of language training; the place of a knowledge of the mother-tongue in education; the value of clearness, force, fluency, and grace of expression; the formation of the habit of speaking and writing good English; the effect of the teacher's example upon the pupil's language; the value of reading and of memorizing good literature; expression as a stage in the development of every lesson; the necessity for special exercises in oral and written composition.

Methods: Methods of securing the pupil's free natural expression and of extending his vocabulary through conversations on various topics, including the Kindergarten Gifts, Occupations, and Stories; the principles governing criticism of composition; the dangers connected therewith and means of avoiding them; the selection and organization of materials.

Books of Reference:

- Ontario Public School Manual: *Composition and Spelling*.
 Arlo Bates: Talks on the Writing of English.

Nature Study and Geography

Methods: Nature study and geography as a method; special characteristics of a typical lesson; directions for conducting school excursions; the study of special

topics dealing with the materials and illustrating methods of presentation; the great importance of relating feeling to knowledge in nature study work; relation to formal science and to the symbolic games of the kindergarten.

Selection of material for nature study and geography lessons under varying conditions in rural and urban schools; uses and limitations of books, pictures, models, collections, etc.; supplementary materials such as stories and poems.

School gardens, a phase of nature study work; the planning and the care of school gardens.

Frequent excursions for the purpose of studying and collecting materials in their natural environment and relations.

Books of Reference:

Ontario Public School Manuals: *Nature Study, Geography.*

Hodge: *Nature Study and Life.*

Dearness: *How to Teach Nature Study.*

Silcox and Stevenson: *Nature Study.*

Scott: *Nature Study and the Child.*

Coulter: *Practical Nature Study.*

Arithmetic

Methods: The scope of arithmetic; kindergarten materials and occupations as a basis for number; how to use the pupil's home experiences and the kindergarten materials in developing a knowledge of indefinite relations as larger, smaller, longer, etc.; and of definite relations through use of gifts, squared table, kindergarten sticks, etc.; the development of the number idea; the unit, its nature and use; the necessity for standard units; the ratio idea of number; counting; measuring with standard units; numbers from 1 to 10, from 10 to 20, etc.; number pictures; notation and numeration, addition, tables, order of exercises, devices; subtraction, additive method, decomposition method; order of exercises, devices; typical forms of seat work; application of number facts in the Occupations of the Kindergarten-Primary and of the First Form; simple problems.

Book of Reference:

Ontario Public School Manual: *Arithmetic.*

Reading

Introductory: The process involved in reading; the relation of ideas to symbols; the associations of visual, auditory, and motor images in reading; conditions of the formation of accurate visual and auditory impression; constant necessity for connecting the printed symbol directly with the idea; the function and value of silent reading, sight reading.

Methods: Primary reading; the various methods of teaching beginners, advantages and disadvantages of each; devices for securing rapid word recognition and for fixing attention on the thought and feeling as well as upon the word forms in the

earlier stages; means of securing natural expressive reading; the place and limitations of imitative reading; common faults on the part of both pupil and teacher and how to correct them; criticism by teacher and by pupil.

Attention to the mechanical side of and practice in oral reading; exercises in breathing, articulation, and vocalization.

Books of Reference:

Public School Manual: *Primary Reading*.
The High School Reader. The Canada Publishing Co.

Literature

Methods: Nature and elements of literature; qualities of literature that appeal to pupils of different ages; basis of selection of material therefor; special importance of literature that appeals through the ear; suggested lists of fairy tales, fables, nature stories, etc.

Songs and story telling; comparison of the values of reading and telling; how to tell stories successfully; the reproduction by the pupils; how to make corrections; the use of story books; how to teach memory gems.

Special importance of teacher's own qualifications; a class course in literature; the literary study of portions of the Bible prescribed by the Department of Education; directed sessional private reading courses for teachers-in-training; suggestions for their future reading.

NOTE—Teachers-in-training having conscientious objections to the literary study of the Bible are excused therefrom by the Principal.

Books of Reference:

Ontario Public School Manual: *Literature*.
 The Golden Rule Books.
 MacClintock: *Literature in the Elementary School*.
 Arlo Bates: *Talks on the Teaching of Literature*.
 Lindsay, Maud: *Mother Stories*.
 Lindsay, Maud: *More Mother Stories*.
 Lindsay, Maud: *A Story Garden of Little Children*.
 Alden: *Knights of the Silver Shield*.
 Robert Louis Stevenson: *A Child's Garden of Verse*.
 Bailey: *For the Children's Hour*.
 Harrison: *In Story Land*.
 Bryant: *How to Tell Stories to Children*.
 Chedlock: *The Art of the Story Teller*.
 Bailey: *For the Story Teller*.

Writing

The same as the First Class Course, but with special references to the Kindergarten-Primary and Form I. (See page 17.)

Art

The same as the First Class Course. (See page 16.)

Manual Training

Modelling: The materials used for modelling, and how they are prepared and stored; free modelling as a means of expression in connection with home and school life; representation on the sand-table as a means of teaching geographical concepts; representation of natural objects, oranges, apples, nuts, leaves, bananas, etc.; illustration of stories.

Weaving: The materials used for weaving, raffia, wool, yarn, string, pieces of clean rag, silkoline; natural material, pine needles, rushes, etc.; the formation of patterns and designs on paper looms; winding on cardboard foundations, napkin rings, boxes, picture frames; simple braiding of three or four strands and the use of braids for stitching; weaving on simple looms and on cardboard shapes, hats, mats, cushions, and dolls' clothing; knitting.

Paper: Free cutting and picture mounting; folding simple geometric figures such as squares, rectangles, triangles, etc., and the use of these as elements in the formation of patterns; illustration of stories; making simple objects such as wind-mills, boxes, trays, simple furniture; furnishing a doll's house.

Drawing: Geometrical drawing as applied to paper and cardboard construction; simple scales and lettering for blackboard use in the preparation of lessons.

The course in Manual Training shall include a consideration of the Kindergarten Gifts and Occupations as methods of introducing free manual expression. The work in the different materials shall include the initial work of Form II, in order that the teacher-in-training may see the relation thereto of the work of Form I.

Book of Reference:

Ontario Public School Manual: *Manual Training*.

Sewing

The Kindergarten work in tablets and sticks and the outlining of picture cards.

Study and application of different stitches; basting, running stitching, back stitching, combination stitch, overcasting, top sewing, blanket, herring-bone, feather-stitching, mending; darning (different kinds); button holes; mitred and square corner; hemming; making a doll's apron.

Books of Reference:

Ontario Public School Manual: *Sewing*.

Walker: Manual of Needlework and Cutting Out.

Vocal Music

The same as the First Class Courses, but with special reference to the Kindergarten, Kindergarten-Primary and Form I. (See page 15.)

Hygiene

The same as the First Class Courses. (See page 20.)

Physical Culture

Effects of Physical Culture; its hygiene; emphasis upon the instruction for Kindergarten-Primary and Form I classes; general directions for exercises; simple exercises and positions; marching, running, jumping, and breathing exercises; the arrangement of the class (order movements); order and progression of exercises; as many as practicable of the selected physical exercises in the tables of *The Syllabus of Physical Training for Schools, 1933*; supplementary physical exercises; abdominal exercises, skipping exercises, dancing steps; folk dances and singing games; indoor and outdoor games; class-room exercises; dress suitable for exercises, calisthenics and drill.

Books of Reference:

The Syllabus of Physical Training for Schools. Revised Edition, 1933.

Bancroft: Games for the Playground, Home, School and Gymnasium.

Kimmons: Guild of Play Book. Parts 1, 2 and 3.

Mari Hofer: Popular Folk Games and Dances for Playground, Vacation School, and Schoolroom Use.

Burchenal: Dances of the People.

Burchenal: Folk Dances and Singing Games.

Bremner: Song Games and Ball Games.

Newton Harris: Graded Games and Rhythmical Exercises.

Niels Bukh: Fundamental Gymnastics.

ADDENDA

The content of the subjects for Permanent First Class certificates which were prescribed for the holders of Permanent Second Class Certificates obtained under former regulations, is as follows: (See Section 27 III (2) and (3) of Circular 23.)

Science of Education

(a) General Method: Review of the Course for the Interim First Class Certificates.

(b) Educational Psychology: A brief summary of the historical development of psychology; value of psychology; elements of behaviour; mechanism of action; instinct, feeling, emotion; sensation and perception; images, ideas, and intelligence; attention, interest, and association; laws of learning; nature of intelligence; concept, judgment, inference; character; the psychology of school subjects; intelligence tests; standard scales; the abnormal child.

TEXT BOOKS: *The Ontario Normal School Manuals: The Principles of Method, Introduction to Psychology.*

Books of Reference:

Adams: The New Teaching.

Burt: Mental and Scholastic Tests.

Ballard: The New Examiner.

Drummond: An Introduction to Child Study.

Gates: Psychology for Students of Education.

Kilpatrick: Foundations of Method.

Sandiford: Educational Psychology.

Starch: Educational Psychology.

Montessori: The Montessori Method.

School Management

(a) Forms of educational control; Department of Education and its functions; school boards, their election and functions; types of schools and the function of each type, by whom supported, and how financed.

(b) (*The Urban School*). The urban school and its problems; types of schools; organization; special qualifications of the urban teacher; his appointment, tenure of office and promotion; his duties as principal, as assistant; duties in relation to the other members of the staff, to the pupils, parents, citizens, trustees, school officers and officials; his responsibilities with respect to discipline, supervision, promotion, care of school property, health of pupils; his part in community activities; time-tables, school games, class-room routine, recitations, assignments, seat work, home-work, examinations; records, reports, registers.

(c) (*The Rural School*). The rural school and its problems; rural life, its conditions and advantages; the importance, efficiency, condition and needs of rural schools; types of rural schools; rural school boards, township boards, school areas, township, county, etc.; curriculum; organization; classification, promotions, and examinations; time-tables; time-saving devices; recitations, assignments, seat work; supervision of games and other school activities; care of school; improvement of grounds; health and sanitary conditions; games and recreations; the rural school teacher, his quali-

cations, privileges, and advantages; his relation to pupils, parents, trustees, and school officials; his social relations, leadership; school equipment, library; school garden and home projects; school clubs; hot lunch; records, reports, registers.

(d) (*General*). School Law and Regulations, Public Health Acts and Regulations, and School Attendance Act, in so far as they refer to the duties of school boards, teachers, and pupils; school grants; text-book regulations.

TEXT BOOK: *Ontario Normal School Manual: School Management*.

Books of Reference:

- Barnes: Rural School Management.
- Bennett: School Efficiency.
- Bagley: Class Management; School Discipline.
- Calvin: Introduction to High School Training.
- Cubberley: The Principal and His School.
- Lowth: Everyday Problems of the Country Teacher.
- Lowth: The Country Teacher at Work.
- Reeder: The Fundamentals of Public School Administration.
- Lynch: Individual Work and the Dalton Plan.
- Spain: The Platoon School.
- Stout: The High School.

English

(a) **Literature:** (i) The intensive study of Shakespeare's *Twelfth Night*, *The Winter's Tale*, *Hamlet*. Modern Novels: Bennett, *The Old Wives' Tale*; Conrad, *Lord Jim*. Modern Plays: Galsworthy, *The Man of Property*, *The Silver Box*; Shaw, *Arms and the Man*, *Saint Joan*.

(ii) The extensive study of Butler, *Erewhon*; Shakespeare, *Anthony and Cleopatra*; Hardy, *Tess of the D'Urbervilles*; Synge, *Riders to the Sea*, *The Playboy of the Western World*; Lewis, *Babbitt*.

(b) **Composition:** The principles of composition; the study of models; the writing of original essays and of essays based on topics suggested by texts selected for extensive reading; oral composition; debates; rules governing debates, rules of order for literary societies, public meetings, etc.

(c) **Grammar:** No formal grammar will be required, but attention will be given to the subject in connection with composition, oral and written.

TEXT BOOKS: *Ontario Normal School Manuals—Composition and Spelling, Grammar, Literature*.

Books of Reference:

- Dickie: Modern Practice in the Teaching of Composition.
- Diltz: Models and Projects for English Composition.
- French: Writing.
- Foerster and Steadman: Sentences and Thinking.

Mathematics

(a) **Algebra:** Review of Interim First Class Course; use of detached coefficients; symmetry and some of its simpler applications; correlation of algebra and geometry; graphical methods of illustrating formulae and of interpreting the work of equations; the theory of fractional and negative indices; surds and surd equations; quadratic equations of one and two unknowns; theory of quadratics; simple ratios and proportion; typical lesson plans; solution of typical exercises from Lower and Middle School algebra.

(b) **Geometry:** Review of Interim First Class Course; practical exercises; review of propositions of Book I with much practice in solving exercises thereon.

Books of Reference:

Godfrey and Siddons: *The Teaching of Elementary Mathematics.*

Ligda: *The Teaching of Elementary Algebra.*

Smith and Reeve: *The Teaching of Junior High School Mathematics.*

Latin

The relation of method in teaching Latin to linguistic method in general; the effect of the object of teaching Latin upon the method in the various departments, such as oral reading, grammar, translation, sight-reading and the literary or historical content; illustration of methods in typical lessons; use of the phonograph.

Pronunciation; oral reading, sight-reading, and English translations of the Introductory lessons in the Ontario High School Latin Book; general principles of word-structure and sentence-structure; word order; special topics of inflection and syntax included in the earlier lessons of the Latin Book; methods of teaching the parts of a lesson; the subject matter, the vocabulary and the exercises; exercises in translation and interpretation from the High School Latin Reader prescribed for the Middle School examinations; special topics of inflection and syntax included in the later lessons of the Latin Book.

Books of Reference:

Ontario High School Latin Book.

Ontario High School Latin Reader.

Bennett: *The Teaching of Latin.*

Chickering and Hoadley: *Beginner's Latin by the Direct Method.*

Crawford: *On pronouncing Latin.*

Hale: *The Art of Reading Latin.*

Westaway: *Quantity and Accent in the Pronunciation of Latin.*

French

Introductory: Importance of the study of a modern language; aims of the study; general instructions in regard to conducting classes with the purpose of helping the student to profit from observation lessons.

History of Methods: Consideration of methods formerly employed or still in vogue; the beginnings of modern language study; the Grammar Method; the Natural

Method; the Reading Method; the Psychological Method of Gouin; the Direct Method as used at present in Great Britain and other countries.

Study of Methods: Comparison of methods in view of the present condition in the schools, e.g., the age and attainments of pupils, the size of classes, allotment of time, text-books in use, regulations governing the teacher; illustrative lessons.

Pronunciation: Study of phonetics; the international phonetic alphabet; phonetic texts and dictionaries; drill in pronunciation; oral work; conversation; use of the phonograph.

Elementary Classes: Classes conducted without a text-book; the study of sounds; conversation lessons; how to make use of the objects in the class-room; pictures and drawings; value of unison work; variety and interest; dictation; note-books and their correction; books and pictures; necessity for thorough drill.

Grammar: Inductive and deductive teachings; grammatical rules and their value; special illustrative lessons on essentials; special review lessons.

Translations into English: When to introduce the Reader; the grammatical preparation necessary; idiomatic translation; methods of conducting the recitation; exercises in translation and interpretation of selections from the French Reader prescribed for the Middle School examinations.

Books of Reference:

Ontario High School French Grammar; The French Reader.

Modern Language Instruction in Canada.

Jespersen: How to Teach a Foreign Language.

Breul: Teaching of Modern Languages.

Savory and Jones: Sounds of the French Language.

Dumville: French Pronunciation.

Heath: Report of the Committee of Twelve.

Palmer: Scientific Study and Teaching of Languages.

Kittson: Theory and Practice of Language-Teaching.

Gourio: Direct Method of Teaching French.

Biology

General: The values of observational studies and the proper use of the text book in relation to these; the making of notes and drawings; how to use models and charts; collection of specimens by pupils for their own use and for the school museum; the use of the school museum and means of adding to its contents.

The course in Botany includes the following topics:

The Plant: The plant as a whole and the parts of the plant, including root, stem, leaf, flower and fruit; the extent of the course for Lower School work and illustrations of the method of study and means of securing materials are to be illustrated through type lessons.

Fungi: How to collect and prepare specimens; illustrative lessons on the habits and economic importance of common forms.

Plant Adaptations: Observation lessons on the preparation of plants for winter; method of study of storage organs, pollination and means of protection.

Seed Germination: Modes of germinating seeds and type lessons on the parts of seeds and the changes during germination.

Plant Morphology: Methods of preparing and of using materials for demonstrating the cross-sections of herbaceous and woody stems; instructions in the use of hand lens and the compound microscope.

Physiological Experiments: The method of experimental study illustrated by type studies of such topics as osmosis, capillarity, starch tests, functions of leaves, etc.

Economic Value of Plants: How to secure and how to use books, bulletins, etc., on this subject.

Plant Identification: Practice in the use of the botany key and discussion of the method.

Forestation: Discussion of the meaning and value of forestation; literature of this subject; demonstration of the principles.

The course in Zoology includes the following topics:

Study of Living Animals: Construction, care and use of the aquarium and vivarium; how to conduct out-of-school studies by excursions and problem directing observations.

Supplementary Reading: Instructions for securing and for using the literature dealing with the topics of the supplementary course.

Anatomical Studies: Problems for field observations; directions for collecting and preserving specimens; methods in laboratory studies covering the work of the Lower School on insects, crustaceans, earthworms, molusca, fishes, frogs, turtles, snakes, birds and mammals; type lessons should be taught to serve as a basis for the discussion of methods in observational study and to illustrate the mode of relating the form or structure to function.

Books of Reference:

Ontario High School Manual: *Suggestions for Teachers of Science.*

Burland: *First Course in Zoology.*

Woodhead: *The Study of Plants.*

Lloyd and Bigelow: *The Teaching of Biology.*

Physics and Chemistry

Introductory: Scope and value of the natural sciences; meaning of science and scientific method; educational value of science; inductive and deductive methods of investigation.

General Method: How to conduct experimental work in Physics and Chemistry; the proper use of note-books, text-books, laboratory manuals, supplementary reading, and class-room discussions in connection with experimental work; laboratory apparatus; proper equipment; manipulation of and making simple apparatus; the viewpoint for the science teacher.

Physical Science: The general method outlined above to be illustrated by lessons to the students and to other classes in the presence of the students; these lessons to be based on the Lower and Middle School Courses in Hydrostatics, Heat, Light,

Sound, Magnetism, Electricity and Mechanics; the topics should be composed chiefly of those difficult of presentation, such as: air pressure, liquid pressure, shadows, refraction of light, images in lenses and practical applications, the spectrum, specific gravity, sources of heat, effects of heat, transmission of heat, specific heat and heat fusion, the simple cell, the electro-magnet and its common applications, the earth's magnetism, the bar magnet and mariner's compass, sound vibrations, sound interference, laws of transverse vibrations of strings and problems related thereto.

Chemistry: Order of treatment; methods of conducting experiments and giving instructions illustrating the points stated under general method and also illustrating the special methods of treatment of such topics as: air and its components, gas laws, combustion, solution, formulae, equations, chemical arithmetic, oxides, acids, bases, salts and chemical nomenclature; how to approach laws and theories inductively.

Books of Reference:

Ontario High School Manual: *Suggestions for Teachers of Science.*

Twiss: Principles of Science Teaching.

Smith and Hall: The Teaching of Chemistry and Physics.

